

The ground vertebrate fauna of coastal areas between Busselton and Albany, Western Australia.

R.A. How,* J. Dell* and W.F. Humphreys*

Abstract

Coastal areas between Busselton and Albany have been altered substantially since European settlement in the 1830s. Previous studies show that the mammalian fauna in parts of the region changed significantly prior to European settlement; subsequently several additional species have disappeared.

This study, using Museum records and local area sampling, indicates most mammalian populations are small and often isolated. The Ringtail Possum *Pseudocheirus occidentalis* and Quokka *Setonix brachyurus* persist but are rapidly diminishing. The herpetofauna has not previously been documented and it appears that assemblages in the Busselton-Margaret River areas differ from those further south and east. A positive correlation between the percentage of viviparous reptiles in subregional assemblages and the annual number of rainy days, suggests that viviparity probably confers a reproductive advantage in these cool moist climates.

Environmental factors such as predation, competition, disease and particularly habitat fragmentation and fire will continue to threaten many species of birds and mammals with local extinction.

Introduction

The near-coastal areas of the lower south-west of Western Australia between Busselton and Albany have come under increasing pressures since European settlement. In the last decade the region has become the focus of major developments for agriculture, mining and tourism; these have exacerbated the fragmentation of the unique landforms and biota of the region.

Reviews of the literature on vertebrate fauna (Daze 1984), invertebrate fauna (Majer and Chia 1980) and aquatic fauna (Chiffings and Brown 1977) in Western Australia, coupled with the records and collections of the WA Museum, have highlighted the paucity of collections and publications on the fauna of most near-coastal areas of the lower south-west.

Considerable historical information was collected by early navigators (see Beard 1981), and data collected by early naturalists has been summarised for plants (Beard 1981), mammals (Shortridge 1909, 1936, Kitchener *et al.* 1978) and birds (Whittell 1954a). Most of these collections were made around regional centres of population, e.g. Albany and Busselton, or on trips from Perth.

* Department of Biogeography & Ecology, Western Australian Museum, Francis Street, Perth, Western Australia 6000.